



IMAGINE APP'D
2879

PATENT
ATTORNEY DOCKET NO.: 041501-5437

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:)
Hong Bae PARK) Confirmation No.: 4657
Application No.: 09/894,903) Group Art Unit: 2879
Filed: June 29, 2001) Examiner: M. Santiago
For: FLAT LUMINESCENT LAMP AND)
METHOD FOR MANUFACTURING)
THE SAME)

Mail Stop Appeal Brief-Patents
Commissioner for Patents
U.S. Patent and Trademark Office
2011 South Clark Place
Customer Window
Crystal Plaza Two, Lobby, Room 1B03
Arlington, VA 22202

Sir:

APPELLANT'S BRIEF UNDER 37 C.F.R. § 1.192 TRANSMITTAL FORM

1. Transmitted herewith is an Appellant's Brief Under 37 C.F.R. § 1.192 (in triplicate), which is being submitted further to the Notice of Appeal filed February 5, 2004.
2. Additional papers enclosed:

Form PTO-1449, _____ references included
 Citations
 Declaration of Biological Deposit
 Submission of "Sequence Listing", computer readable copy and/or amendment pertaining thereto for biotechnology invention containing nucleotide and/or amino acid sequence.

3. Oral Hearing Under 37 C.F.R. § 1.194

Oral hearing is hereby requested.
 Fee under 37 C.F.R. § 1.17(d) is enclosed.

4. Extension of Time

The proceedings herein are for a patent application and the provisions of 37 C.F.R. § 1.136(a) apply.

Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Applicant petitions for an extension of time, the fees for which are set out in 37 C.F.R. § 1.17(a), for the total number of months checked below:

Total Months <u>Requested</u>	Fee for <u>Extension</u>	[Fee for Small Entity]
<input type="checkbox"/> one month	\$ 110.00	\$ 55.00
<input type="checkbox"/> two months	\$ 400.00	\$ 200.00
<input type="checkbox"/> three months	\$ 920.00	\$ 460.00
<input type="checkbox"/> four months	\$ 1,440.00	\$ 720.00

Extension of time fee due with this request: \$_____.

If an additional extension of time is required, please consider this a Petition therefor.

An extension for _____ months has already been secured and the fee paid therefor of \$_____ is deducted from the total fee due for the total months of extension now requested.

5. Constructive Petition

EXCEPT for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account 50-0310. This paragraph is intended to be a CONSTRUCTIVE PETITION FOR EXTENSION OF TIME in accordance with 37 C.F.R. § 1.136(a)(3).

6. Fee Payment

- No fee is to be paid at this time.
- Please charge Deposit Account No. 50-0310 the amount of \$330.00 for the filing a brief in support of an appeal under 37 C.F.R. §1.17(c) fee.
- The Commissioner is hereby authorized to charge any additional fees which may be required, including fees due under 37 C.F.R. §§ 1.16 and 1.17, or credit any overpayment to Deposit Account 50-0310.

Respectfully submitted,

MORGAN, LEWIS & BOCKIUS LLP

Dated: April 5, 2004

By:



Victoria D. Hao

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APPELLANT'S BRIEF UNDER 37 C.F.R. § 1.192

This brief is in furtherance of the Notice of Appeal, filed in the above-identified patent application on February 5, 2004, and appealing the final rejections of claims 1-16 by the United States Patent and Trademark Office in a Final Office Action dated September 5, 2003. A fee of \$330.00 required under 37 C.F.R. §1.17(c) is being filed concurrently herewith. The period for filing this brief extends through April 5, 2004.

This brief is being transmitted in triplicate.

1. The Real Party in Interest

The real party in interest in this appeal is LG. Philips LCD Co., Ltd. of Seoul, Korea,

Sangnong Enterprise Co., Ltd. of Seoul, Korea, and Young Jong LEE, a natural person of Korea.

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2. Related Appeals and Interferences

Appellant is not aware of any other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in this appeal.

3. Status of Claims in Application

The status of the claims is as follows:

Claims canceled: None

Claims withdrawn from consideration but not canceled: 17-20

Claims pending: 1-20

Claims allowed: None

Claims rejected: 1-16.

The claims on appeal are 1-16.

4. The Status of Amendments

On November 18, 2003, Appellant filed a "Request for Reconsideration Under 37 C.F.R. § 1.116" in response to the Final Office Action dated September 5, 2003. The "Request for Reconsideration Under 37 C.F.R. § 1.116" filed on November 18, 2003 included remarks on the patentability of the claims, which were not amended. An Advisory Action mailed on December 31, 2003 indicated that the Request for Reconsideration under 37 C.F.R. § 1.116 had been considered but does not place the application in condition for allowance because the rejection is believed to be proper.

All amendments have been entered. A copy of the pending claims is attached as an Appendix to this brief.

5. Summary of the Invention

Appellant's invention relates generally to a flat luminescent lamp. Attention is particularly directed to paragraph [0038] to paragraph [0065], of the specification and to FIGs. 3-8E.

In one aspect, Appellant's flat luminescent lamp comprises first and second substrates (31 and 31a). Each of the first and second substrates (31 and 31a) includes a plurality of grooves, and the first and second substrates (31 and 31a) are attached to each other at a plurality of adhesive portions (areas marked by dotted lines in FIG. 3) with the grooves of the first substrate (31) facing the grooves of the second substrate (31a). In the grooves, first and second electrodes (33 and 33a) are arranged to be separated from each other in the up and down directions, respectively. See, for example, FIG. 6. For instance, the first electrode (33) may be formed on the first substrate (31), while the second electrode (33a) may be formed on the second substrate (31a). See paragraph [0056].

In addition, first and second frames (39 and 39a) are used for sealing the first and second substrates (31 and 31a). See, for example, FIGs. 3-5. In a preferred embodiment, the first frame (39) is attached to the second substrate (31a) along one side of the first substrate (31), while the second frame (39a) is attached to the first substrate (31) along a side of the second substrate (31a) that is not attached to the first frame (39). See, for example, FIG. 5.

6. Issues

The Examiner has rejected claims 1, 3, 4, 8, 9 and 11-15 under 35 U.S.C. § 102(b) as being anticipated by *Lynn et al.* (WO 92/02947), rejected claim 2 under 35 U.S.C. § 103(a) as being unpatentable over *Lynn et al.* in view of *Yamano et al.* (U.S. Patent No. 4,767,965),

rejected claims 5-7 under 35 U.S.C. § 103(a) as being unpatentable over *Lynn et al.* in view of *Go* (JP 8-162069), rejected claim 10 under 35 U.S.C. § 103(a) as being unpatentable over *Lynn et al.* in view of *Fukushima et al.* (U.S. Patent No. 3,873,870), and rejected claim 16 under 35 U.S.C. § 103(a) as being unpatentable over *Lynn et al.* in view of *Yamamoto et al.* (U.S. Patent No. 5,341,231). Appellant respectfully submits that these rejections under 35 U.S.C. §§ 102(b) and 103(a) are improper and should be reversed.

7. Grouping of Claims

In as far as presented herein, claims 1-10, 12-14 and 16 stand or fall together, claim 11 stands or falls by itself, and claim 15 stands or falls by itself.

8. Arguments

(i) Rejections under 35 U.S.C. § 112, first paragraph

No claims are presently rejected under 35 U.S.C. § 112, first paragraph.

(ii) Rejections under 35 U.S.C. § 112, second paragraph

No claims are presently rejected under 35 U.S.C. § 112, second paragraph.

(iii) Rejections under 35 U.S.C. § 102

Claims 1, 3, 4, 8, 9 and 11-15 stand rejected under 35 U.S.C. § 102(b) as being anticipated by *Lynn et al.* (WO 92/02947). Appellant respectfully submits that claims 1, 3, 4, 8, 9 and 11-15 are allowable for at least the following reasons.

Summary of *Lynn et al.*

Lynn et al. discloses a glass-envelope configuration, e.g., for vacuum tubes and fluorescent lamps use. As shown in FIGs. 7 and 8, the glass-envelope configuration of *Lynn et al.* includes glass plates (132 and 134) "mounted together and sealed about their peripheral edges

136 and 138.” Page 11, lines 3-6 of *Lynn et al.* In particular, a “suitable glass frit, not shown, is glazed in the peripheral spacing to seal the edges of the envelope.” Page 12, lines 6-7 of *Lynn et al.*

The glass plates (132 and 134) of *Lynn et al.* are formed with projecting portions (140 and 142) and ridges (144 and 146). In particular, the glass plates (132 and 134) are mounted so that their corresponding ridges (144 and 146) are in contact and cavities (150 and 152) are formed between the two plates. In addition, “electrodes 154 mounted on a pair of electrode substrates 155 and 156 are inserted at opposite ends of the cavities before the plates are sealed.” Page 12, lines 8-10 of *Lynn et al.*

Claims 1, 3, 4, 8, 9, and 12-14

With respect to independent claim 1, Appellant respectfully submits that *Lynn et al.* fails to teach or suggest the claimed combination as set forth in independent claim 1 including at least “first and second substrates having a plurality of grooves formed therein and attached to each other at a plurality of adhesive portions,” “first and second electrodes arranged in the discharge spaces to be separated from each other,” and “first and second frames sealing the first and second substrates.”

The Final Office Action asserts that the glass plates (132 and 134), the electrodes (154) and the electrode substrates (155 and 156) of *Lynn et al.* correspond to the first and second substrates, the first and second electrodes and the first and second frames, as set forth in claim 1, respectively. See paragraph 2, lines 3-9 of the Final Office Action. In addition, the Advisory Action dated December 31, 2003 alleges that the “electrode substrates **155 and 156** [as taught by *Lynn et al.*] provide support to electrodes **154** while providing a sealing frame structure (frame

being defined as an open structure or rim for encasing, holding, or bordering) between the top and bottom substrates [132 and 134].” Appellant respectfully disagrees.

Appellant respectfully submits that one cannot consider the electrode substrates (155 and 156) of *Lynn et al.* to be “first and second frames sealing the first and second substrates” as claimed at least because the electrode substrates (155 and 156) as taught by *Lynn et al.* are not frames or open structures that seal, encase, hold or border the glass plates (132 and 134). For instance, as shown in FIG. 7 of *Lynn et al.*, the electrode substrates (155 and 156) of *Lynn et al.* are planar elements being sandwiched between the glass plates (132 and 134) and held by the glass frit seal along the peripheral of the glass plates (132 and 134).

In contrast, the presently claimed invention, as recited in independent claim 1, includes first and second substrates attached to each other at a plurality of adhesive portions and sealed by first and second frames. As described in the specification at paragraph [0064], for example, since only two frames are required and no separate support rod is formed between the first and second substrates, the number of parts required for making the lamp can be minimized, thereby saving the manufacturing cost. Accordingly, Appellant respectfully submits that *Lynn et al.* fails to teach or suggest the claimed combination as set forth in independent claim 1 including at least “first and second substrates having a plurality of grooves formed therein and attached to each other at a plurality of adhesive portions,” “first and second electrodes arranged in the discharge spaces to be separated from each other,” and “first and second frames sealing the first and second substrates.”

Appellant respectfully asserts that the rejection of claim 1 under 35 U.S.C. § 102(b) should be withdrawn because the applied art does not teach or suggest each feature of

independent claim 1. Furthermore, Appellant respectfully asserts that dependent claims 3, 4, 8, 9, and 12-14 are allowable at least because of their dependence from independent claim 1 and the reasons set forth above.

Claim 11

With respect to claim 11, Appellant respectfully submits that *Lynn et al.* further fails to teach or suggest the claimed combination as set forth in claim 11 including “first and second substrates having a plurality of grooves formed therein and attached to each other at a plurality of adhesive portions,” “first and second electrodes arranged in the discharge spaces to be separated from each other,” “first and second frames sealing the first and second substrates,” and “wherein the first and second electrodes are formed along the discharge spaces.”

As discussed above, *Lynn et al.* discloses an arrangement including electrodes (154) being mounted on a pair of electrode substrates (155 and 156). In particular, as shown in Fig. 7 of *Lynn et al.*, the electrodes (154) are in contact only with the electrode substrate (156) and have a short portion extending beyond the electrode substrate (156). Accordingly, Appellant respectfully submits that one cannot consider the electrode substrates (155 and 156) of *Lynn et al.* to be “formed along the discharge spaces” as claimed.

Appellant respectfully asserts that the rejection of claim 11 under 35 U.S.C. § 102(b) should be withdrawn because the applied art does not teach or suggest each feature of claim 11.

Claim 15

With respect to claim 15, Appellant respectfully submits that *Lynn et al.* further fails to teach or suggest the claimed combination as set forth in claim 15 including at least “first and second substrates having a plurality of grooves formed therein and attached to each other at a

plurality of adhesive portions," "first and second electrodes arranged in the discharge spaces to be separated from each other," "first and second frames sealing the first and second substrates," and "wherein the first frame is attached to the second substrate along one side of the first substrate while the second frame is attached to the first substrate along a side of the second substrate that is not attached to the first frame."

As discussed above, *Lynn et al.* discloses an arrangement including electrode substrates (155 and 156) of *Lynn et al.* being sandwiched between the glass plates (132 and 134). As shown in Fig. 7 of *Lynn et al.*, the electrode substrates (155 and 156) are attached to the same sides of the glass plates (132 and 134), i.e., both of the electrode substrates (155 and 156) are attached to a lower side of the upper glass plate (132) and both of the electrode substrates (155 and 156) are attached to an upper side of the lower glass plate (134). Accordingly, Appellant respectfully submits that one cannot consider the electrode substrates (155 and 156) of *Lynn et al.* to be first and second frames "wherein the first frame is attached to the second substrate along one side of the first substrate while the second frame is attached to the first substrate along a side of the second substrate that is not attached to the first frame" as claimed.

Appellant respectfully asserts that the rejection of claim 15 under 35 U.S.C. § 102(b) should be withdrawn because the applied art does not teach or suggest each feature of claim 15.

(iv) Rejections under 35 U.S.C. § 103

Claim 2 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over *Lynn et al.* in view of *Yamano et al.* (U.S. Patent No. 4,767,965). Appellant respectfully submits that claim 2 is allowable at least because of its dependence on claim 1 and the reasons set forth above with

regard to the Rejection under 35 U.S.C. §102 and because *Yamano et al.* fails to remedy the deficiencies of *Lynn et al.*

Claims 5-7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Lynn et al.* in view of *Go* (JP 8-162069). Appellant respectfully submits that claims 5-7 are allowable at least because of their dependence on claim 1 and the reasons set forth above with regard to the Rejection under 35 U.S.C. §102 and because *Go* fails to remedy the deficiencies of *Lynn et al.*

Claim 10 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over *Lynn et al.* in view of *Fukushima et al.* (U.S. Patent No. 3,873,870). Appellant respectfully submits that claim 10 is allowable at least because of its dependence on claim 1 and the reasons set forth above with regard to the Rejection under 35 U.S.C. §102 and because *Fukushima et al.* fails to remedy the deficiencies of *Lynn et al.*

Claim 16 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over *Lynn et al.* in view of *Yamamoto et al.* (U.S. Patent No. 5,341,231). Appellant respectfully submits that claim 16 is allowable at least because of its dependence on claim 1 and the reasons set forth above with regard to the Rejection under 35 U.S.C. §102 and *Yamamoto et al.* fails to remedy the deficiencies of *Lynn et al.*

(v) Other Rejections

No claims are presently rejected under grounds other than those referred to above.

* * * * *

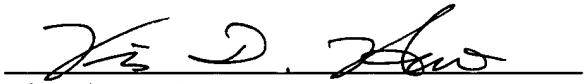
In view of the foregoing, Appellant respectfully requests the reversal of the Examiner's rejections and the allowance of the pending claims. If there are any other fees due in connection with the filing of this Appellant's Brief, please charge the fees to our Deposit Account

No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account No. 50-0310.

Respectfully submitted,

MORGAN, LEWIS & BOCKIUS LLP

By:


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9. Appendix

The text of the claims involved in the appeal are:

Claim 1 (Previously Presented): A flat luminescent lamp comprising:

first and second substrates having a plurality of grooves formed therein and attached to each other at a plurality of adhesive portions;
a plurality of discharge spaces in the grooves between the first and second substrates;
first and second electrodes arranged in the discharge spaces to be separated from each other;
first and second phosphor layers formed in the discharge spaces; and
first and second frames sealing the first and second substrates.

Claim 2 (Original): The flat luminescent lamp of claim 1, further comprising a reflecting material layer formed in the discharge spaces adjoining the first substrate.

Claim 3 (Original): The flat luminescent lamp of claim 1, wherein the plurality of discharge spaces are formed along a vertical direction of the first and second substrates.

Claim 4 (Original): The flat luminescent lamp of claim 1, wherein the first and second frames are formed along a horizontal direction of the first and second substrates.

Claim 5 (Original): The flat luminescent lamp of claim 1, wherein the first electrode includes a transparent conductive material.

Claim 6 (Original): The flat luminescent lamp of claim 5, wherein the transparent conductive material includes indium tin oxide.

Claim 7 (Original): The flat luminescent lamp of claim 1, further comprising a first dielectric layer formed in the discharge spaces adjoining the first substrate and a second dielectric layer formed in the discharge spaces adjoining the second substrate.

Claim 8 (Original): The flat luminescent lamp of claim 1, wherein the plurality of discharge spaces each having a round shape or a polygon shape close to a round shape.

Claim 9 (Original): The flat luminescent lamp of claim 1, wherein the first and second substrates each comprise a glass material.

Claim 10 (Original): The flat luminescent lamp of claim 1, wherein the first substrate comprises a ceramic material while the second substrate comprises a glass material.

Claim 11 (Original): The flat luminescent lamp of claim 1, wherein the first and second electrodes are formed along the discharge spaces.

Claim 12 (Original): The flat luminescent lamp of claim 1, wherein the plurality of discharge spaces have a stripe shape.

Claim 13 (Original): The flat luminescent lamp of claim 1, wherein the plurality of discharge spaces are spaced apart from each other.

Claim 14 (Original): The flat luminescent lamp of claim 1, wherein the first electrode include two or more separate electrodes.

Claim 15 (Original): The flat luminescent lamp of claim 1, wherein the first frame is attached to the second substrate along one side of the first substrate while the second frame is attached to the first substrate along a side of the second substrate that is not attached to the first frame.

Claim 16 (Original): The flat luminescent lamp of claim 1, further comprising a diffusion sheet formed at a rear side of the second substrate.

Claim 17 (Withdrawn): A method for manufacturing a flat luminescent lamp comprising the steps of:

forming a plurality of stripe shaped grooves in first and second substrates;
forming first and second electrodes on the first and second substrates in the grooves;

forming a reflecting material layer on the first substrate including the first electrode in the grooves;

forming phosphor layers on the reflecting material layer and the second electrode in the grooves;

attaching the first and second substrates to each other so that the grooves face each other; and

sealing the first and second substrate after injecting a phosphor gas into the grooves.

Claim 18 (Withdrawn): The method of claim 17, further comprising the step of forming a dielectric layer after forming the first and second electrodes.

Claim 19 (Withdrawn): The method of claim 17, wherein the grooves are formed so that both ends of neighboring grooves are connected with each other.

Claim 20 (Withdrawn): The method of claim 17, wherein the step of sealing the first and second substrates includes the step of soldering the first and second frames.